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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

HAVAN, THU THAO

ART UNIT PAPER NUMBER

2672

DATE MAILED: 07/13/2004

15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/602,044

Applicant(s)

BRONSKILL ET AL.

Examiner

Thu-Thao Havan

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION***Response to Amendment***

Claims 1-39 are pending in the present application.

Response to Arguments

Applicant's arguments filed May 4, 2004 have been fully considered but they are not persuasive. As addressed below, Collins teaches the claimed limitations.

Collins discloses determining a first segment in the bitmap brush corresponding to the first polygon on the guideline (col. 2, line 40 to col. 3, line 17). In other words, Collins teaches the scanned image is converted to a bitmap. In figure 2B, if the image contains color information, the colors are converted to gray scale. Otherwise, if the image contains gray scale, it is converted to black and white. At the end the image is a bitmap, that is, a one bit pixmap representing the drawing as a black and white raster. Converting colors to gray scale, may be implemented by first converting the colors to RGB color space and then converting to gray scale using color weights of, for example, red=0.30, green=0.59, and blue=0.11. The conversion to black and white from gray may be done simply by applying a threshold, such as setting to black all pixels that are at least 50% gray. Other values could be used, both for the threshold and for the color weight conversion. The bitmap is preprocessed to simplify boundary conditions and to minimize "dirt" (small areas of black introduced in the scanning process). Turning to figure 2C, further processing is simplified if all border pixels

Art Unit: 2672

of the bitmap are made white. Figure 3A illustrates a bitmap image. In that figure 3B illustrates a bitmap image after the border pixels have been written in white. In these and the other figures, each square represents one pixel, either black or white, in the bitmap. Thus, Collins teaches a bitmap brush as claimed in the claimed limitations.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims **1-39** are rejected under 35 U.S.C. 102(e) as being unpatentable by Collins (US patent no. 6,173,075).

Re claim **1**, Collins discloses a method of drawing a brush stroke with a bitmap brush having pixels the brush stroke rendered relative to a guideline the guide line specifying an arbitrary path for the brush stroke the method comprising the steps of determining a first polygon on the guideline (col. 1, lines 40-59; col. 7, lines 8-17), determining a first segment in the bitmap brush corresponding to the first polygon on the guideline (col. 2, line 40 to col. 3, line 17), and applying a first transformation to a bitmap image mapped in the first segment in the bitmap brush to generate a corresponding bitmap image in the first polygon on the guideline (col. 4, line 2 to col. 5, line 39; figs. 1a-2a). In other words, Collins

Art Unit: 2672

teaches the line art polygons are then formed as a set of vector polygons, each polygon being formed around one unbroken. The result of this process is illustrated in figure 1a, which shows a drawn "Y" digitized into a bitmap.

Furthermore, figure 2a discloses the strokes are formed. A stroke is a connected sequence of vectors (conventionally, line segments, which in some embodiments are thought of as having a direction), or equivalently, a sequence of points. A stroke that follows a line art boundary normally defines a contour loop, that is, a sequence of points (vectors) that loops back on itself, which illustrates the boundary contours, in the forms of polygons defining the inside and outside boundaries of line art.

Re claims **2-4, 11-18, 20-22, and 29-37**, Collins teaches the first polygon comprises making a piece-wise linear approximation of the curved guideline the piece-wise approximation having a plurality of line segments that are connected end to end, generating sides of the first polygon at a first line segment in the plurality of line segments by drawing lines of specified length at the endpoints of the first line segment at least at one specified angle to the first line segment, and connecting the ends of the lines of specified length to complete the first polygon (col. 12, lines 14-53; figs. 2a, 2d, 2f, and 3h-3i). Collins teaches the process builds polygons from the strokes in the stroke list. In figure 2f, for each stroke in the stroke list, the area of the polygon defined by the points in the stroke is computed. If the area is positive, the polygon is appended to the polygon list and the next stroke is selected from the stroke list. If, on the other hand, the polygon area is not positive, the stroke is recognized as defining a hole (a sub-polygon) in

Art Unit: 2672

some polygon. To place the hole properly, the process begins at the beginning of the polygon list, and looping through the polygon list, finds the first polygon that contains a point of the sub-polygon. The sub-polygon is linked to the polygon.

Re claims **5 and 23**, Collins teaches the first side bisects the angle between the first line segment in the guideline and the adjacent second line segment in the guideline (fig. 2h).

Re claims **6 and 24**, Collins discloses guideline forms a closed loop (col. 10, lines 1-65; col. 12, lines 41-53). Collins teaches the loop around the line art is complete and the stroke points connected to form a closed contour.

Re claims **7-8 and 25-26**, Collins discloses first transformation is a bilinear transformation (fig. 2e and 2i). The weighted average is the bilinear transformation step.

Re claims **9 and 27**, Collins discloses first transformation is a texture mapping (col. 1, lines 6-25). It is inherent that cartoon animation comprises texture mapping.

Re claims **10 and 28**, Collins discloses a desired thickness for the brush stroke at a point on the curved guideline corresponds to a separation between a first line and a second line in the guideline (col. 12, lines 14-53; figs. 3a-3i).

Re claims **19 and 38**, the limitations of claims 19 and 38 are identical to claim 1 above except for computer-executable instructions. Therefore, claims 19 and 38 are treated the same as discussed with respect to claim 1 above.

Art Unit: 2672

Collins's teaching is a computer system. It is apparent that computer software is used for executable instructions in relation to module.

Re claim **39**, Collins discloses identifies corners of a polygon by truncating overlaps between adjacent polygons to generate corners of a convex polygon (col. 11, lines 47 to col. 12, line 13).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Thao Havan whose telephone number is (703) 308-7062. The examiner can normally be reached on Monday to Thursday from 9:00-5:00.

Art Unit: 2672

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (703) 305-4713.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121

Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Thu-Thao Havan
July 8, 2004



MATTHEW LUU
PRIMARY EXAMINER